

United States Government

Department of Energy

Bonneville Power Administration

memorandum

DATE: May 13, 2002

REPLY TO
ATTN OF: KEPR

SUBJECT: Supplement Analysis for the Transmission System Vegetation Management Program FEIS
(DOE/EIS-0285/SA-66)

TO: Don Atkinson - TFN/SNOHOMISH
Bob Sweet – TFNF/SNOHOMISH

Proposed Action: Vegetation Management along the Monroe-Custer No.1 500 kV (46/1-61/1), Monroe-Custer No.2 500 kV (45/5-60/2), and Murray-Bellingham/Sedro Tap No.1 230 kV (25/1-26/2) transmission line ROW corridors. The proposed work will be accomplished in the indicated sections of the transmission line corridor with a corridor width of 125 to 275 feet.

Location: The ROW is located in Skagit and Whatcom Counties, WA, being in the Snohomish Region.

Proposed by: Bonneville Power Administration (BPA).

Description of the Proposed Action: BPA proposes to clear unwanted vegetation in the rights-of-ways and around tower structures that may impede the operation and maintenance of the subject transmission lines and access roads, including Reclaim and Danger Trees. BPA plans to conduct vegetation control with the goal of removing tall growing vegetation that is currently or will soon be a hazard to the transmission line. BPA's overall goal is to have low-growing plant communities along the rights-of-way to control the development of potentially threatening vegetation. All work will be executed in accordance with the National Electrical Safety Code and BPA standards. Danger and "C" trees and chemical treatment contract work is scheduled to begin May 28, 2002.

Analysis: This project meets the standards and guidelines for the Transmission System Vegetation Management Program Final Environmental Impact Statement (FEIS) and Record of Decision (ROD). The Planning steps are described in the attached checklist. (See checklist).

- Vegetation herbicide treatments on sprouting-types of species ensure that the roots are killed. Prevention of resprouts encourages low-growing plant communities to establish themselves and flourish on the right-of-way.
- Treatments on steep, moderate and level slopes will be consistent with the Vegetation Management FEIS and as shown on the attached checklist in section 4.
- Tribal lands are not involved and no known cultural resource sites are listed with the State of Washington. In the event cultural sites are identified an archaeologist will be brought in to evaluate the site.

- Water resources (streams, rivers, wetlands, wells, and watersheds) will be protected with 100-foot buffers (165 foot buffer for the wells).
- No 'in stream' work is to take place without prior consultation with the appropriate government agencies and permits are in place.
- Riparian T&E areas.
200' buffers for the ESA listed Bull Trout and Salmon streams and rivers are in effect as outlined in the Vegetation FEIS. See attached checklist.
- Other T&E areas.
Bald Eagle nesting habitat is located within ¼ mile of maintenance area between structures 48/4 & 49/1 on the Monreo-Custer No.1, on the Skagit River. Maintenance activities will be suspended until after August 15th. Should work need to occur within the buffer the Wildlife Species Coordinator will be contacted for direction on how to proceed.
Grey wolf sightings shown on Tview are not valid according to Washington State Fish and Wildlife. No restrictions are recommended. In the event of a sighting of the endangered species further consultation with the Washington State and US Fish and Wildlife services should be initiated.
- Herbicides will be applied by licensed applicators following manufacturers' label instructions and BPA's management prescriptions. All herbicides selected for use are on the FEIS list and proper buffers have been identified (See section 3.6 of checklist).
- Reseeding /replanting regimes have not been planned at this time. Low growing aggressive native vegetation within the Right Of Way can naturally dominate with the elimination of tall growing vegetation.
- Beginning in the spring, 2002 the brush cutting and herbicide application program will be monitored for soil erosion and follow-up treatment, and if necessary a native grass reseeding program will be implemented.

This Supplement Analysis finds that 1) the proposed actions are substantially consistent with the Transmission System Vegetation Management Program FEIS (DOE/EIS-0285) and ROD, and; 2) there are no new circumstances or information relevant to environmental concerns and bearing on the proposed actions or their impacts. Therefore, no further NEPA documentation is required.

/s/ Greg Tippetts

Greg Tippetts
Physical Scientist – KEPR-4

CONCUR: /s/ Thomas C. McKinney
Thomas C. McKinney
NEPA Compliance Officer

DATE: 05/17/02

Attachments

cc:

L. Croff – KEC-4
T. McKinney – KEC-4
M. Hermeston – KEP-4
M. Martin – KEPR/Covington
J. Sharpe – KEPR-4
P. Key – LC-7
M. Johnson – TF/DOB-1
S. Davis – TFN/Snohomish
L. Alvarez – TFN/Snohomish
C. Pursiful – TFNK/Covington
Environmental File – KEC
Official File – KEP-4 (EQ-14)

Gtippetts:gt:4722:5/14/02 (KEP-KEPR-W:\EP\2002 FILES\EQ\EQ-14\FEIS-0285-SA-66-Monroe-Custer #'s12.doc)

Vegetation Management Checklist

Monroe-Custer No. 1

46/1-61/1

And

Monroe - Custer No. 2

45/5 to 60/2

Prepared By: **Don Atkinson**
Natural Resource Specialist
May 3, 2002

1. IDENTIFY FACILITY AND THE VEGETATION MANAGEMENT NEED

1.1 Describe Right-of-way.

Corridor Name	Corridor Length & kV	Easement width	Miles of Treatment
Monroe-Custer No. 1	46/1 to 61/1 500kv	150' to 412.5'	Approx. 16 miles
Monroe-Custer No. 2	46/1 to 60/2 500kv	150' to 275'	Approx. 15 miles
Murray-Bellingham	25/1 to 26/2 500kv	125'	Approx. 1 mile

See Handbook — List of Right-of-way Components for checkboxes and the requirements for the components Rights-of-way, Access Roads, Switch Platforms, Danger Trees, and Microwave Beam paths.

Right Of Way:

Right-Of-Way – Clearing trees and brush within the right-of-way and treating with herbicides. The right-of-way will be treated using selective and non-selective methods that include hand cutting, mowing and herbicide treatments. Herbicide treatments will include spot treatment (stump treatment, basal treatment, and/or spot foliar), or localized treatments (including broadcast application and cut stubble treatments).

Transmission Structures – Tower sites will be treated using selective and non-selective methods that include hand cutting, mowing and herbicide treatments. The herbicide treatments include spot (cut stump or basal treatment), localized and broadcast applications including cut stubble treatments.

Clearing Requirements:

- Control all tree and brush species within about 30 ft. of transmission structures. Cut stumps are not to be taller than 2 – 4 inches.
- Pull all debris and slash out of the 30-ft. area around transmission structures.
- Access Road Clearing Requirements: - (there are approximately miles 20 of machine and hand cutting)
- Control all vegetation except grasses, to enable safe driving.
- The access road is to be 14 to 25 ft. wide with a 15-ft.- high clearance. Limbs should not hang down into the access road.
- Cut stumps are not to be taller than 2 – 4 inches in the roadbed.
- Cut stumps horizontal to the ground to prevent personal injuries and tire puncture.
- Trim limbs back as flush to the trunk as possible when trees are rooted outside of the access road.
- Pull all debris back from the access road as prescribed.
- Cut stumps horizontal to the ground to prevent personal injuries and tire puncture.
- Trim limbs back as flush to the trunk as possible when trees are rooted outside of the access road.
- Pull all debris back from the access road as prescribed.

Reclaim (“C”) Trees – will be cut as part of this project

Danger Trees (off right-of-way): – DT clearing will be done as part of this project

1.2 Describe the vegetation needing management.

See handbook — List of Vegetation Types, Density, Noxious Weeds for checkboxes and requirements.

Vegetation Types:

Western Red Cedar

Douglas Fir

Hemlock

Alder

Willows – mid span or where ground to conductor clearance is low

Cottonwoods

Scotch broom – along access roads and around structures or mid span where ground to conductor clearance is low

Blackberries - along access roads and around structures or mid span where ground to conductor clearance is low

Density:

The density is variable through the project and ranges from Low (50 stems or less per acre) to as high (250 + stems per acre).

- 1.3 List measures you will take to help promote low-growing plant communities. If promoting low-growing plants is not appropriate for this project, explain why. See Handbook — for requirements and checkboxes.**

Tall-growing vegetation that is currently or will soon be a hazard to the line will be treated. Low growing plants (plant communities) will not be (In places where tall growing vegetation must be left in place, it may not be possible to promote low-growing plants.)

Cut-stump or follow-up spot herbicide treatments on species that re-sprout will be carried out to ensure that the roots are killed (follow-up treatment may take place during the next growing season). Herbicides will not be applied using high volume methods to ensure that non-target species are not treated.

Note: there is no Forest Service land in this project.

Vegetation that will grow tall will be selectively eliminated *before* it reaches a height or density to begin competing with low-growing species. Desirable low-growing plants will not be disturbed. Only selective vegetation control methods that have little potential to harm non-target vegetation will be used.

- 1.4 Describe overall management scheme/schedule.**

See Handbook - **Overall Management Scheme/Schedule.**

Description of the Proposed Action: BPA proposes to clear unwanted vegetation in the access roads and around tower structures that may impede the operation and maintenance of the subject transmission line. All work will be in accordance with the National Electrical Safety Code and BPA standards. BPA plans to conduct vegetation control with the goal of removing vegetation that is currently encumbering access to the transmission line.

The work will provide system reliability.

Initial entry – Using hand cutting or mechanical mowers, BPA will complete brush management activities on the right-of-way, access roads and towers sites, chemically treat stumps and stubbles with herbicides (spot, localized, and broadcast treatments) to ensure that the roots are killed preventing new sprouts and selectively eliminating vegetation that prevents access to the power

lines. Areas may be replanted or re-seeded with low-growing vegetation or grasses if there is limited vegetation to re-establish the site. Cut, lop and scatter and stump treatment (where possible to prevent re-sprouting) is the preferred method on State and Private lands. Areas where densities are high, or that have lots of Scotch Broom and /or blackberries will be mowed using a track mounted mowing head. Access roads and structure sites will also be mowed and chemically treated.

Subsequent entries – Follow-up/re-treatment, within the next growing season, with herbicides in areas that were not treated due to adverse weather conditions or where there was not a good kill. Access roads, structure sites and areas that were not treated immediately after cutting will be spot treated within one growing season.

Future cycles – This area is being managed on a 3 to 5 year maintenance free cycle for brush and danger trees. During routine patrol, the right-of-way will be examined for tall growing trees on the right-of-way and danger trees (DT's) off the right-of-way. The overall vegetation management scheme will be to cut and treat all encumbering vegetation from the right-of-way using a combination of manual, mechanical and herbicide treatments as outlined in the initial treatment every 3 to 5 years.

2. IDENTIFY SURROUNDING LAND USE AND LANDOWNERS/MANAGERS

2.1 List the types of landowners and land uses along your corridor.

See Handbook — **Landowners/Managers/Uses** for requirements, and **List of Landowners/Managers/Uses** for a checkbox list.

Washington State Department of Natural Resources, private landowners (rural residential, farms, grazing land, small and private forest lands).

2.2 Describe method for notifying right-of-way landowners and requesting information (i.e., door hanger, letter, phone call, e-mail, and/or meeting). Develop landowner mail list, if appropriate.

See Handbook — **Methods for Notification and Requesting Information** for requirements.

Letters or Personal contact by BPA and/or the Contractor along with door hangers. This will be done before and during the project. The Prescription/Cut Sheets will be modified as needed based on any input received during the project.

2.3 List the specific land owner/land use measures — determined from the handbook or through your consultations with the entities — that will be applied.

See handbook — **Requirements and Guidance for Various Landowners/Uses** for requirements and guidance, also **Residential/Commercial**, **Agricultural**, **Tribal Reservations**, **FS-managed lands**, **BLM –managed lands**, **Other federal lands**, **State/ Local Lands**.

Based on consultation with the Upper Skagit Indian Tribe (Keith Wyman), additional streams were added to the list in 3.6 as having T&E fish. These streams do not show up in T-View or BPA's GIS system.

There is a Bald Eagle nest site within 1/4 mile of structures 48/4 and 49/1 on the Monroe Custer No.1, on the Skagit River.

*Note-not all areas within the project area will be treated with chemicals, riparian areas, and areas where private landowners who do not want chemicals used will not be treated.

2.4 Review any existing landowner agreements (e.g. tree/brush Permits or Agreements). List in table above any provisions that need to be followed and where they are located.

See handbook — Landowner Agreements for requirements.

Monroe-Custer No. 1 (See attached maps for locations)

Span		Landowner/use	Specific measures to be applied
From	To		
47/1 + 25	47/2 + 250	Possible Christmas Tree Area - Check	Not a T&B, easement doc. Allows for Christmas Trees, owned by the State of WA
48/4 + 130	48/5 +00	Wild & Scenic River	Contact U. S. Forest Service
53/6 + 1000	53/6 + 1020	Tree & Brush Agreement Pineda	Landowner will maintain trees planted along the southerly property line.
55/3 + 465	56/1 + 100	Sensitive Landowner, Roy C. Hall	Notify before any work is done on his property!!
53/6 + 1000	53/6 + 1020	Tree & Brush Agreement Pineda	Landowner will maintain trees planted along the southerly property line.
56/2 + 680	56/3 + 00	Tree & Brush Agreement CANCEL (Cook)	New landowner (Vine), need to cancel old T&B Agreement, check with new landowner
56/5 + 270	56/5 + 1020	New landowner Old landowner-Comack	Check with New landowner, Marcia Cobb, 327 Martin Rd. Sedro-Woolley
57/1 + 640	57/2 + 70	Tree & Brush agreement CANCELED	New land owner, no T&B Agreement signed, check before cutting. Chit wood

Monroe-Custer No. 2 (See attached maps for locations)

Span		Landowner/use	Specific measures to be applied
From	To		
49/2 + 500	49/3 + 860	Old Van Felt homestead	Check with landowner before cutting, Brenda Van Felt, 510-736-0928
51/1 + 250	51/1 + 360	Tree & Brush Agreement 990081	Skagit Fisheries Enhancement Group to maintain (360-336-0172)
51/3 + 800	51/3 + 1325	Tree & Brush Agreement 990100	Land owner will maintain, Vance 360-856-2043
55/1 + 350	55/3 + 900	Sensitive Landowner, Roy C. Hall	Notify before any work is done on his property!!
55/5 +400	55/5 + 760	Tree & Brush Agreement CANCEL (Cook)	New landowner (Vine), need to cancel old T&B Agreement, check with new landowner
56/2 + 350	56/2 + 650	Tree & Brush agreement Joseph H. Kutz, 83076	Land owner will maintain
56/3 + 300	56/3 + 850	New landowner	Check with New landowner, Marcia Cobb, 327 Martin Rd. Sedro-Woolley

Monroe-Custer No. 2 (See attached maps for locations)

Span		Landowner/use	Specific measures to be applied
From	To		
56/4 + 20	56/4 + 475	Tree & Brush Agreement Al Doctor, 86150	Land owner will maintain
56/4 + 530	56/4 + 1000	New landowner	Need to cancel old T&B Agreement, check with new landowner, Chitwood
56/5 + 550	56/5 + 850	Tree & Brush agreement Louise Duvall, 79246	Land owner will maintain
59/1 + 740	59/3 + 350		

2.5 List any known casual informal use of the right-of-way by non-owner publics. List any constraints or measure's to take due to the informal use.

See handbook — Casual Informal Use of Right-of-way for requirements.

None Known

2.6 List other potentially affected people, agencies, or tribes (that are not landowners/managers) that need to be notified or coordinated with. Describe method of notification and coordination.

See handbook — Other Potentially Affected Publics for requirements and suggestions.

None Known, No tribal lands involved

3. IDENTIFY NATURAL RESOURCES

See Handbook — Natural Resources

3.1 List any water resources (streams, rivers, lakes, wetlands) that may be impacted by vegetation control activities. For each water body describe the control methods and requirements or mitigation measures that will be used.

See Handbook — Water Resources for requirements for working near water resources including buffer zones.

Monroe-Custer No. 1 (See attached maps for locations)

Span		Water body	T&E ?	Treatment Zone	Herbicide	Application Technique	Buffer	Other
From	To							
46/1 + 430	46/1 + 680	Creek	no	Riparian	See below	See below	See below	
46/3 + 00	46/3 + 190	Marsh/ Wetland	no	Riparian	See Below	See below	See below	
46/3 + 780	46/3 + 980	Spring	no	Riparian	See below	See below	See below	
46/4 + 315	46/4 + 515	Creek	no	Riparian	See below	See below	See below	
46/5 + 270	46/5 + 470	Creek	no	Riparian	See below	See below	See below	
46/5 + 790	46/5 + 1200	Creek/Water supply	no	Riparian	See below	See below	See below	
47/1 + 125	47/1 + 325	Creek & Marsh	no	Riparian	See below	See below	See below	No Spray Area per landowner

Monroe-Custer No. 1 (See attached maps for locations)

Span		Water body	T&E ?	Treatment Zone	Herbicide	Application Technique	Buffer	Other
From	To							
47/2 + 30	47/2 + 440	Creek	no	Riparian	See below	See below	See below	
47/2 + 715	47/2 + 915	Creek	no	Riparian	See below	See below	See below	
47/3 + 560	47/3 + 760	Creek	no	Riparian	See below	See below	See below	
47/4 + 500	47/4 + 960	Creek & Marsh	no	Riparian	See below	See below	See below	
47/5 + 180	47/5 + 510	Creek	no	Riparian	See below	See below	See below	
47/6 + 360	48/1 + 270	Marsh/ Wetland	no	Riparian	See below	See below	See below	
48/4 + 350	48/4 + 1725	Skagit River	yes	Riparian T&E	See below	See below	See below	Anadromous Fish & Bull Trout
48/5 + 720	48/5 + 940	Creek	no	Riparian	See below	See below	See below	
49/5 + 410	49/5 + 850	Skiyou Slough	no	Riparian	See below	See below	See below	
50/1 + 90	50/1 + 375	Creek	no	Riparian	See below	See below	See below	
50/2 + 320	50/3 + 975	Coal Creek	yes	Riparian T&E	See below	See below	See below	Anadromous Fish
51/5 + 110	51/2 + 800	Creek and Wetland	yes	Riparian T&E	See below	See below	See below	Anadromous Fish
51/4 + 925	51/5 + 140	Wetland	no	Riparian	See below	See below	See below	
51/5 + 460	51/5 + 650	Wetland	no	Riparian	See below	See below	See below	
51/5 + 750	51/5 + 950	Creek	no	Riparian	See below	See below	See below	
52/2 + 550	52/3 + 740	Red Creek & other creeks	yes	Riparian T&E	See below	See below	See below	Red creek is the water supply to the hatchery
52/4 + 710	52/5 + 180	Creeks	no	Riparian	See Below	See Below	See Below	
53/1 + 60	53/1 + 310	Creek	no	Riparian	See Below	See Below	See Below	

Monroe-Custer No. 1 (See attached maps for locations)

Span		Water body	T&E ?	Treatment Zone	Herbicide	Application Technique	Buffer	Other
From	To							
53/2 + 400	53/2 + 600	Creek	no	Riparian	See Below	See Below	See Below	
53/3 + 1030	53/3 + 1230	Creek	no	Riparian	See Below	See Below	See Below	
53/5 + 00	53/5 + 190	Creek	no	Riparian	See Below	See Below	See Below	
54/1 + 70	54/1 + 490	Hansen Creek	yes	Riparian T&E	See below	See below	See below	Anadromous Fish
54/5 + 120	54/5 + 320	Creek	no	Riparian	See below	See below	See below	
55/4 + 340	55/4 + 540	Creek	no	Riparian	See below	See below	See below	
55/4 + 980	56/1 + 00	Creek & Marsh	no	Riparian	See below	See below	See below	
56/1 + 820	56/1 + 1020	Creek	no	Riparian	See below	See below	See below	
56/5 + 100	56/5 + 750	Thunder Creek	yes	Riparian T&E	See below	See below	See below	Anadromous Fish
57/1 + 490	57/1 + 690	Creek	no	Riparian	See below	See below	See below	
57/1 + 990	57/2 + 220	Creek	no	Riparian	See below	See below	See below	
57/2 + 480	57/2 + 730	Creek	no	Riparian	See below	See below	See below	
57/3 + 50	57/3 + 390	Creeks	no	Riparian	See below	See below	See below	
57/3 + 510	57/3 + 780	Creek	no	Riparian	See below	See below	See below	
57/4 + 190	57/4 + 570	Creeks	no	Riparian	See below	See below	See below	
58/1 + 450	58/1 + 1050	Mills Creek	yes	Riparian T&E	See below	See below	See below	Anadromous Fish
58/2 + 300	58/2 + 650	Creek	no	Riparian	See below	See below	See below	
58/2 + 860	58/2 + 1150	Creek	no	Riparian	See below	See below	See below	

Monroe-Custer No. 1 (See attached maps for locations)

Span		Water body	T&E ?	Treatment Zone	Herbicide	Application Technique	Buffer	Other
From	To							
58/3 + 260	58/4 + 300	Creeks (4)	no	Riparian	See below	See below	See below	
58/4 + 460	58/4 + 730	Creek	no	Riparian	See below	See below	See below	
58/5 + 70	58/5 + 340	Creek	no	Riparian	See below	See below	See below	
59/1 + 140	59/1 + 340	Creek	no	Riparian	See below	See below	See below	
59/1 + 600	59/1 + 840	Creek	no	Riparian	See Below	See below	See below	
59/2 + 250	59/2 + 640	Creek	no	Riparian	See below	See below	See below	
59/2 + 760	59/2 + 960	Creek	no	Riparian	See below	See below	See below	
59/3 + 210	59/3 + 410	Creek	no	Riparian	See below	See below	See below	
59/4 + 575	59/4 + 875	Creek	no	Riparian	See below	See below	See below	
59/4 + 1460	59/4 + 1720	Creek	no	Riparian	See below	See below	See below	
60/2 + 250	60/2 + 1270	Samish River	yes	Riparian T&E	See below	See below	See below	Anadromous Fish
60/2 + 1370	60/2 + 1530	Wetland / Marsh	no	Riparian	See below	See below	See below	
60/3 + 850	60/3 + 1170	Spring	no	Riparian / water supply	See below	See below	See below	
Riparian	<p>RIPARIAN: County or private lands, within 30.5 m (100 ft.) of a stream or open water. Available: all manual, spot and localized herbicide, and biological treatments, except grazing. No mechanical treatments.</p> <p>Herbicides: Within 50 ft. of a stream, only cut-stump and localized treatments using practically toxic or Slightly toxic formulations of glyphosate, imazapyr, and Escort can be used up to the waters edge. Highly Toxic and very highly toxic (to fish) herbicides will not be used in this zone. Triclopyr (Garlon 4) may be used only more than 100 ft. from streams or water.</p>							
Riparian T&E	<p>RIPARIAN SALMON: BPA, county, or private lands, within 61 m (200 ft.) of a listed salmon stream. Available: all manual, spot and localized herbicide, and biological treatments, except grazing. No mechanical treatments.</p> <p>Herbicides: No herbicides within 200 feet from the waters edge. From 100 to 200 feet away for stream or water, Escort, clopyralid, imazapyr, practically toxic or Slightly toxic formulations of glyphosate, and triclopyr (Garlon 3A) can be used. Highly Toxic and very Highly toxic (to fish) herbicides will not be used in this zone. glyphosate, and triclopyr (Garlon 3A) can be used. Highly Toxic and very Highly toxic (to fish) herbicides will not be used in this zone.</p>							

Monroe-Custer No. 2 (See attached maps for locations)

Span		Water body	T&E ?	Treatment Zone	Herbicide	Application Technique	Buffer	Other
From	To							
45/5 + 600	45/5 + 800	Turner Creek	no	Riparian	See below	See below	See below	
46/4 + 200	46/4 + 950	Creek	no	Riparian	See Below	See below	See below	
47/2 + 525	47/4 + 250	Holding Pond	no	Riparian & no spray area	See below	See below	See below	Judy Reservoir
48/3 + 400	48/3 + 1850	Skagit River	yes	Riparian T&E	See below	See below	See below	Anadromous Fish

Change To Murray / Bellingham

25/3 + 210	25/3 + 380	Wetland	no	Riparian	See below	See below	See below	
28/4 + 250	28/4 + 360	Skagit River	yes	Riparian	See below	See below	See below	
25/6 + 200	25/6 + 1370	Skagit River	yes	Riparian T&E	See below	See below	See below	Anadromous Fish

Change Back To Monroe / Custer #2

49/2 + 275	49/2 + 500	Creek	no	Riparian	See below	See below	See below	
49/4 + 375	49/4 + 175	Hansen Creek	yes	Riparian T&E	See below	See below	See below	Anadromous Fish
50/1 + 250	50/2 + 200	Hansen Creek	yes	Riparian T&E	See below	See below	See below	Anadromous Fish
50/3 + 630	50/3 + 930	Wetland	no	Riparian	See below	See below	See below	
51/1 + 260	51/1 + 360	Creek	?	Riparian	See below	See below	See below	
51/1 + 940	51/1 + 1300	Brick Yard Creek	no	Riparian	See below	See below	See below	
51/3 + 640	51/3 + 850	Creek	no	Riparian	See below	See below	See below	
51/3 + 1050	51/3 + 1250	Creek	no	Riparian	See below	See below	See below	
52/1 + 120	52/1 + 460	Creek	no	Riparian	See below	See below	See below	

Monroe-Custer No. 2 (See attached maps for locations)

Span		Water body	T&E ?	Treatment Zone	Herbicide	Application Technique	Buffer	Other
To	From							
52/2 + 175	55/2 + 660	Pond & Creek	no	Riparian	See below	See below	See below	
52/3 + 350	52/3 + 625	Wetland	no	Riparian	See below	See below	See below	
52/3 + 675	52/3 + 1040	Creek	no	Riparian	See below	See below	See below	
53/1 + 390	53/1 + 800	Creek & Wetland	no	Riparian	See below	See below	See below	
54/1 + 960	54/3 + 1190	Creek & Marsh	no	Riparian	See below	See below	See below	
55/1 + 460	55/1 + 670	Creek	no	Riparian	See below	See below	See below	
55/3 + 175	55/3 + 400	Creek	no	Riparian	See below	See below	See below	
55/3 + 600	55/3 + 760	Creek	no	Riparian	See below	See below	See below	
55/3 + 910	55/4 + 240	Creek & Marsh	no	Riparian	See below	See below	See below	
55/4 + 560	55/5 + 25	Creek	no	Riparian	See below	See below	See below	
56/3 + 150	56/3 + 640	Creek	no	Riparian	See below	See below	See below	
56/4 + 475	56/4 + 675	Creek	no	Riparian	See below	See below	See below	
56/5 + 725	56/5 + 950	Creek	no	Riparian	See below	See below	See below	
57/1 + 210	57/1 + 460	Creek	no	Riparian	See below	See below	See below	
57/1 + 760	57/1 + 960	Creek	no	Riparian	See below	See below	See below	
57/3 + 720	57/4 + 1400	Samish River & Marsh	no	Riparian T&E	See below	See below	See below	Anadromous Fish
58/1 + 1360	58/1 + 1620	Creek	no	Riparian	See below	See below	See below	
58/5 + 560	59/1 + 460	Creek	no	Riparian	See below	See below	See below	

Monroe-Custer No. 2 (See attached maps for locations)

Span		Water body	T&E ?	Treatment Zone	Herbicide	Application Technique	Buffer	Other
To	From							
59/3 + 00	59/3 + 200	Creek	no	Riparian	See below	See below	See below	
59/3 + 350	59/3 + 560	Creek	no	Riparian	See below	See below	See below	
59/4 + 380	59/5 + 240	Creeks	no	Riparian	See below	See below	See below	
59/5 + 280	59/5 + 310	Creek	no	Riparian	See below	See below	See below	
59/5 + 760	59/5 + 1020	Creek	no	Riparian	See below	See below	See below	
Riparian	<p>RIPARIAN: County or private lands, within 30.5 m (100 ft.) of a stream or open water. Available: all manual, spot and localized herbicide, and biological treatments, except grazing. No mechanical treatments.</p> <p>Herbicides: Within 50 ft. of a stream, only cut-stump and localized treatments using practically toxic or Slightly toxic formulations of glyphosate, imazapyr, and Escort can be used up to the waters edge. Highly Toxic and very highly toxic (to fish) herbicides will not be used in this zone. Triclopyr (Garlon 4) may be used only more than 100 ft. from streams or water.</p>							
Riparian T&E	<p>RIPARIAN SALMON: BPA, county, or private lands, within 61 m (200 ft.) of a listed salmon stream. Available: all manual, spot and localized herbicide, and biological treatments, except grazing. No mechanical treatments.</p> <p>Herbicides: No herbicides within 200 feet from the waters edge. From 100 to 200 feet away for stream or water, Escort, clopyralid, imazapyr, practically toxic or Slightly toxic formulations of glyphosate, and triclopyr (Garlon 3A) can be used. Highly Toxic and very Highly toxic (to fish) herbicides will not be used in this zone. glyphosate, and triclopyr (Garlon 3A) can be used. Highly Toxic and very Highly toxic (to fish) herbicides will not be used in this zone.</p>							

3.6 If planning to use herbicides, list locations of any known irrigation source, wells, or springs (landowners may be able to provide this info if requested).

See Handbook — Herbicide Use Near Irrigation, Wells or Springs for buffers and herbicide restriction

Monroe-Custer No. 1 (See attached maps for locations)

Span		Wells, Irrigation or Springs	Treatment Zone	Buffer
From	To			
55/3 + 740	55/3 + 740	Domestic water supply line	Moderate Terrain	Buried water line - none
53/5 + 830	53/5 + 1030	Water Tank	Non Herbicide Area	100 ft radius
60/3 + 1000	60/3 + 1170	Spring	Non Herbicide Area	100 ft. radius around spring
28/2 + 820	28/2 + 1020	Well	Non Herbicide Area	100 ft. radius around well head
NON-HERB	<p>NON-HERBICIDE AREAS Water sources, springs, wells and other sensitive lands within 100 feet of sensitive Riparian areas or water sources. Hand Cutting Methods only, no Herbicides allowed.</p> <p>WELLS: No herbicides allowed within 100 feet of wellhead. Use only herbicides that do not have ground or surface water advisories between 100 and 165 feet of wellhead. Approved herbicides include: glyphosate, imazapyr, triclopyr, Escort,</p>			
MS	<p>MODERATE SLOPE: BPA, county, or private lands where the ROW is varies from flat to steep terrain with stable soils. . Available: all manual, mechanical treatments using rubber tired mowers on slopes up to 20%, track mowers on slopes up to 60%, and specializes mowing equipment such as the Spyder (trade name) can be used on slopes up to 90% - 100% (when conditions make it feasible). All access roads and structure sites may also be mowed. Also available are biological treatments and all herbicide treatments spot, localized, and broadcast treatment including cut-stubble treatment following a mechanical treatment where suitable.</p> <p>Herbicides: glyphosate, triclopyr (Garlon 3A and 4), imazapyr, dicamba may be prescribed for cut-stump, stem-injection, and basal-stem treatments. In addition to the above herbicides, Escort, and clopyralid can be used spot foliar and Broadcast treatments. 2,4-d amine can be added to the list to control Noxious weed species.</p>			

Monroe-Custer No. 2 (See attached maps for locations)

Span		Wells, Irrigation or Springs	Treatment Zone	Buffer
From	To			
54/1 + 960	54/1 + 960	Well	Non Herbicide Area	100 ft. radius around well head
59/1 + 740	59/3 + 350	Domestic Watershed	Non Herbicide Area	100 ft. radius around well head
28/6 + 200	28/6 + 200	Water Tank	Non Herbicide Area	100 ft. radius around tank Note located on the Murray-Bellingham
NON-HERB	<p>NON-HERBICIDE AREAS Water sources, springs, wells and other sensitive lands within 100 feet of sensitive Riparian areas or water sources. Hand Cutting Methods only, no Herbicides allowed.</p> <p>WELLS: No herbicides allowed within 100 feet of wellhead. Use only herbicides that do not have ground or surface water advisories within 100 feet of wellhead. Approved herbicides include: glyphosate, imazapyr, triclopyr, Escort,</p>			

3.6 List below the areas that have Threatened or Endangered Plant or Animal Species and the name of the species, and any special measures that need to be taken due to their presence. Attach any Bas, T&E maps, or letters from US Fish and Wildlife.

See Handbook — T&E Plant or Animal Species for requirements and determining presence.

Monroe-Custer No. 1 (See attached maps for locations)

Span		Threatened or Endangered Plant or Animal Species	Method/mitigation measures
To	From		
48/4	49/1	T&E Bald Eagle	See Below
48/4 + 350	48/4 + 1725	Anadromous Fish & Bull Trout - Skagit River	See Below
50/2 + 320	50/3 + 985	Anadromous Fish - Coal Creek	See Below
51/ 2 + 110	51/2 + 800	Anadromous Fish Creek & Marsh	See Below
52/2 + 550	52/3 + 740	Hatchery Water Supply Red Creek	See Below
54/1 + 70	54/1 + 490	Anadromous Fish Hanson Creek	See Below
56/5 + 100	56/5 + 750	Anadromous Fish Thunder Creek	See Below
58/1 + 450	58/1 + 1050	Anadromous Fish Mills Creek	See Below
58/1	58/2	T&E Gray Wolf	NONE - See Below
60/2 + 250	60/2 + 1270	Anadromous Fish Samish River	See Below
Riparian T&E	<p>RIPARIAN SALMON: BPA, county, or private lands, within 61 m (200 ft.) of a listed salmon or bull trout stream. Available: all manual, spot and localized herbicide, and biological treatments, except grazing. No mechanical treatments except along access roads and around structures.</p> <p>Herbicides: No herbicide treatments allowed within the buffer zone.</p>		
Gray Wolf	Per correspondence with Washington State Fish and Wildlife the sightings shown in BPA's GIS are not valid. Therefore, there are not any restriction or mitigation measures		
Bald Eagle	<p>Nesting Areas: During nesting season activities within 1/4 mile of the known site will be suspended from January 1st to August 15th. If maintenance activities are required within the buffer during this period then the Wildlife Species Coordinator will be contacted for direction on how to proceed If perching birds or large nests (more than 24 inches in diameter) are seen within the maintenance area, especially around or on the transmission towers, discontinue the activity and contact the Wildlife Species Coordinator.</p>		

Monroe-Custer No. 2 (See attached maps for locations)

Span		Threatened or Endangered Plant or Animal Species	Method/mitigation measures
To	From		
48/3 + 400	48/3 + 1850	Anadromous Fish Skagit River	See Below
49/3	49/4	T&E - Bald Eagle	See Below
49/4 + 375	49/5 + 175	Anadromous Fish Hanson Creek	See Below
50/1 + 250	50/2 + 200	Anadromous Fish Hanson Creek	See Below
51/2	51/3	T&E Bald Eagle	See Below
57/1	57/2	T&E Gray Wolf	See Below
57/3 + 720	57/4 + 1400	Anadromous Fish Samish River	See Below
Riparian T&E	<p>RIPARIAN SALMON: BPA, county, or private lands, within 61 m (200 ft.) of a listed salmon or bull trout stream. Available: all manual, spot and localized herbicide, and biological treatments, except grazing. No mechanical treatments except along access roads and around structures.</p> <p>Herbicides: No herbicide treatments allowed within the buffer zone.</p>		
Gray Wolf	Per correspondence with Washington State Fish and Wildlife the sightings shown in BPA's GIS are not valid. Therefore, there are not any restriction or mitigation measures		
Bald Eagle	<p>Nesting Areas: During nesting season activities within 1/4 mile of the known site will be suspended from January 1st to August 15th. If maintenance activities are required within the buffer during this period then the Wildlife Species Coordinator will be contacted for direction on how to proceed If perching birds or large nests (more than 24 inches in diameter) are seen within the maintenance area, especially around or on the transmission towers, discontinue the activity and contact the Wildlife Species Coordinator.</p>		

Murray-Bellingham (See attached maps for locations)

Span		Threatened or Endangered Plant or Animal Species	Method/mitigation measures
To	From		
25/6 + 200	25/6 + 1370	Anadromous Fish Skagit River	See Below
Riparian T&E	<p>RIPARIAN SALMON: BPA, county, or private lands, within 61 m (200 ft.) of a listed salmon or bull trout stream. Available: all manual, spot and localized herbicide, and biological treatments, except grazing. No mechanical treatments except along access roads and around structures.</p> <p>Herbicides: No herbicide treatments allowed within the buffer zone.</p>		

3.6 List any other measures to be taken for enhancing wildlife habitat or protecting species.

See Handbook — Protecting Other Species for requirements.

None mapped. See resources for mitigation for salmon fisheries. Also, any areas in the corridor with ground to conductor clearances greater than 38.1 m (125 ft.) vertical distance will be select tree cut. This will help provide shade for salmon and other fish.

3.6 List any visually sensitive areas and the measures to be taken at these areas.

See Handbook — Visual Sensitive Areas for requirements.

The Skagit River is listed as a Wild and Scenic River

3.6 List areas with cultural resources and the measures to be taken in those areas.

See Handbook – Cultural Resources for requirements.

None known within the right-of-way.

3.7 List areas with steep slopes or potential erosion areas and the measure and methods to be applied in those areas.

See Handbook – Steep/Unstable Slopes for requirements. See attached maps for exact locations.

Monroe-Custer No. 1

Span		Describe sensitivity	Method/mitigation measures
From	To		
46/1 + 430	46/1 + 680	Steep slope	See below
46/4 + 315	46/4 + 515	Steep slope	See below
46/5 + 00	46/5 + 270	Steep slope	See below
47/2 + 00	47/2 + 915	Steep slope	See below
48/3 + 100	48/4 + 720	Steep slope	See below
51/2 + 800	51/3 + 00	Steep slope	See below
53/2 + 400	53/2 + 600	Steep slope	See below
53/3 + 1030	53/3 + 1230	Steep slope	See below
53/5 + 00	53/5 + 500	Steep slope	See below
55/4 + 00	56/1 + 00	Steep slope	See below
56/5 + 00	56/5 + 750	Steep slope	See below

Monroe-Custer No. 1

Span		Describe sensitivity	Method/mitigation measures
From	To		
57/1 + 490	57/1 + 690	Steep slope	See below
57/1 + 990	57/2 + 220	Steep slope	See below
57/2 + 480	57/2 + 730	Steep slope	See below
57/3 + 50	57/3 + 390	Steep slope	See below
57/3 + 510	57/3 + 780	Steep slope	See below
57/4 + 190	57/4 + 570	Steep slope	See below
58/1 + 00	58/1 + 1050	Steep slope	See below
58/2 + 200	59/4 + 1710	Steep slope	See below
Zones	Treatment Alternatives		
SS	<p>BPA Fee owned State DNR, or private lands where a steep slope or visual resources precludes mechanical treatments except on access roads and around structures. Available: all manual and biological treatments. All herbicide treatments including cut-stubble treatment following a mechanical treatment on access roads and structure sites.</p> <p>Herbicides: glyphosate, triclopyr (Garlon 3A and 4), imazapyr, dicamba may be prescribed for cut-stump, stem-injection, and basal-stem treatments. In addition to the above herbicides, Escort, and clopyralid can be used spot foliar and broadcast treatments. 2,4-d amine can be added to the list to control noxious weed species.</p>		

Monroe-Custer No. 2

Span		Describe sensitivity	Method/mitigation measures
To	From		
45/5 + 600	45/5 + 800	Steep slope	See below
47/2 + 00	47/2 + 525		See below
48/2 + 00	48/3 + 900	Steep slope	See below
51/1 + 1300	51/2 + 00	Steep slope	See below
51/3 + 00	51/3 + 1325		See below

Monroe-Custer No. 2

Span		Describe sensitivity	Method/mitigation measures
To	From		
52/1 + 120	52/1 + 460		See below
56/3 + 150	56/3 + 460	Steep slope Cliff (Rim)	See below
56/4 + 475	56/4 + 675	Steep slope Cliff (Rim)	See below
56/5 + 775	56/5 + 1075	Steep slope Canyon	See below
57/1 + 510	57/1 + 520	Steep slope Canyon	
57/1 + 870	57/1 + 1030	Steep slope Canyon	
58/1 + 1200	58/1 + 1620	Steep Slope	
58/5 + 150	58/5 + 500	Steep Slope	
59/1 + 00	59/5 + 1020	Steep Slope	
Zones	Treatment Alternatives		
SS	<p>BPA Fee owned State DNR, or private lands where a steep slope or visual resources precludes mechanical treatments except on access roads and around structures. Available: all manual and biological treatments. All herbicide treatments including cut-stubble treatment following a mechanical treatment on access roads and structure sites.</p> <p>Herbicides: glyphosate, triclopyr (Garlon 3A and 4), imazapyr, dicamba may be prescribed for cut-stump, stem-injection, and basal-stem treatments. In addition to the above herbicides, Escort, and clopyralid can be used spot foliar and broadcast treatments. 2,4-d amine can be added to the list to control noxious weed species.</p>		

Murray-Bellingham

Span		Describe sensitivity	Method/mitigation measures
To	From		
25/6 + 50	25/6 + 200	Steep slope	See below
Zones	Treatment Alternatives		
SS	<p>BPA Fee owned State DNR, or private lands where a steep slope or visual resources precludes mechanical treatments except on access roads and around structures. Available: all manual and biological treatments. All herbicide treatments including cut-stubble treatment following a mechanical treatment on access roads and structure sites.</p> <p>Herbicides: glyphosate, triclopyr (Garlon 3A and 4), imazapyr, dicamba may be prescribed for cut-stump, stem-injection, and basal-stem treatments. In addition to the above herbicides, Escort, and clopyralid can be used spot foliar and broadcast treatments. 2,4-d amine can be added to the list to control noxious weed species.</p>		

3.8 List areas of spanned canyons and the type of cutting needed.

See Handbook – **Spanned Canyons** for requirements.

Monroe-Custer No. 1

Span		Describe sensitivity	Method/mitigation measures
From	To		
48/3 + 310	48/3 + 675	Select Tree Cut	See below
48/4 + 450	48/4 + 1450	Select Tree Cut Skagit River	See below
58/1 + 650	58/1 + 1050	Select Tree Cut	See below
58/2 + 860	58/2 + 1150	Select Tree Cut	See below
58/3 + 350	58/3 + 630	Select Tree Cut	See below
58/4 + 70	58/4 + 250	Select Tree Cut	See below
58/4 + 500	58/4 + 670	Select Tree Cut	See below
58/5 + 70	58/5 + 340	Select Tree Cut	See below
Zones	Treatment Alternatives		
STC	<p>Any areas in the corridor with greater than 38.1 m (125 ft.) vertical distance between the ground surface and transmission lines. Here, removal is periodically required only of individual trees (single tree cuts) that could encroach into the transmission corridor danger zone.</p> <p>Herbicides: None.</p>		

Monroe-Custer No. 2

Span		Describe sensitivity	Method/mitigation measures
From	To		
48/3 + 930	48/3 + 1400	Select Tree Cut Skagit River	See below - Select cut along the Skagit River
58/5 + 560	59/1 + 460	Select Tree Cut	See below - Select cut within 25 feet of the bank of the creek.
59/5 + 850	59/5 + 950	Select Tree Cut	See below
Zones	Treatment Alternatives		
STC	<p>Any areas in the corridor with greater than 38.1 m (125 ft.) vertical distance between the ground surface and transmission lines. Here, removal is periodically required only of individual trees (single tree cuts) that could encroach into the transmission corridor danger zone.</p> <p>Herbicides: None.</p>		

Murray-Bellingham

Span		Describe sensitivity	Method/mitigation measures
From	To		
25/6 + 200	25/6 + 1050	Select Tree Cut	See below
Zones	Treatment Alternatives		
STC	<p>Any areas in the corridor with greater than 38.1 m (125 ft.) vertical distance between the ground surface and transmission lines. Here, removal is periodically required only of individual trees (single tree cuts) that could encroach into the transmission corridor danger zone.</p> <p>Herbicides: None.</p>		

4. DETERMINE VEGETATION CONTROL METHODS

See Handbook — Methods

4.1 List Methods that will be used in areas not previously addressed in steps above.

See Handbook — Manual, Mechanical, Biological, Herbicides for requirements for each of the methods.

LT	<p>LEVEL TERRAIN: BPA, county, or private lands where the ROW is Fairly flat and level. There are minimal environmental and treatment restrictions. Available: all manual, mechanical (when conditions make it feasible), and biological treatments: all herbicide treatments spot, localized, and broadcast treatment including cut-stubble treatment following a mechanical treatment where suitable.</p> <p>Herbicides: glyphosate, triclopyr (Garlon 3A and 4), imazapyr, dicamba may be prescribed for cut-stump, stem-injection, and basal-stem treatments. In addition to the above herbicides, Escort, and clopyralid can be used spot foliar and Broadcast treatments. 2,4-d amine can be added to the list to control Noxious weed species.</p>
MS	<p>MODERATE SLOPE: BPA, county, or private lands where the ROW is varies from flat to steep terrain with stable soils. . Available: all manual, mechanical treatments using rubber tired mowers on slopes up to 20%, track mowers on slopes up to 60%, and specializes mowing equipment such as the Spyder (trade name) can be used on slopes up to 90% - 100% (when conditions make it feasible). All access roads and structure sites may also be mowed. Also available are biological treatments and all herbicide treatments spot, localized, and broadcast treatment including cut-stubble treatment following a mechanical treatment where suitable.</p> <p>Herbicides: glyphosate, triclopyr (Garlon 3A and 4), imazapyr, dicamba may be prescribed for cut-stump, stem-injection, and basal-stem treatments. In addition to the above herbicides, Escort, and clopyralid can be used spot foliar and Broadcast treatments. 2,4-d amine can be added to the list to control Noxious weed species.</p>
UR-RU	<p>URBAN-RURAL: BPA, county, or private lands where the ROW is adjacent to rural and residential development. Land-use ranges from backyards, pasture, and open areas. Available: all manual, mechanical (when conditions make it feasible), and biological treatments: all herbicide treatments spot, localized, and broadcast treatment including cut-stubble treatment following a mechanical treatment where suitable.</p> <p>Herbicides: glyphosate, triclopyr (Garlon 3A and 4), imazapyr, dicamba may be prescribed for cut-stump, stem-injection, and basal-stem treatments. In addition to the above herbicides, Escort, and clopyralid can be used spot foliar and Broadcast treatments. 2,4-d amine can be added to the list to control Noxious weed species.</p>

SEE CUT SHEET FOR CONTROL METHODS

5. DETERMINE DEBRIS DISPOSAL AND REVEGETATION

5.1 Describe the debris disposal methods to be used and any special considerations.

See Handbook — Debris disposal for a checkbox list and requirements.

Mulching/Mowing

Lope and Scatter

Some areas may require that the brush be chipped; this depends on the requirements of the landowners.

5.2 List areas of reseeding or replanting (those areas not already described in steps 1, 2, or 3).

See Handbook — Reseeding/replanting for requirements.

Not planned at this time. However, if soil disturbance occurs during the project the area will be reseeded.

5.3 If not using native seed/plants, describe why.

Native seed will be considered in all mixes. Introduced species may be more competitive against invading tree species and protecting against erosion.

5.4 Describe timing and any follow-up that will need to take place to ensure germination/success of seeding/planting.

Not planned at this time. However, if reseeding is necessary it will take place this spring or in the fall just before the fall rains.

6. DETERMINE MONITORING NEEDS

See handbook — Monitoring for requirements.

6.1 Describe the follow-up/monitoring cycle that will be used to evaluate the effectiveness of the vegetation control methods used.

The project area will be inspected during treatment. In addition it will be reviewed during routine patrols by the line crew and within one year by the NRS.

6.2 Describe any follow-up or monitoring needed to determine if mitigation measures were effective.

Will review during line patrol by the line crew and within one year by the NRS.

7. PREPARE APPROPRIATE ENVIRONMENTAL DOCUMENTATION

See handbook — Prepare Appropriate Environmental Documentation for requirements.

7.1 Describe any potential project impacts or project work that are different than those disclosed in the Transmission System Vegetation Management Program EIS. Describe how those differences impact natural resources and if the differences are “substantial”.

None

7.2 Is there a need for additional NEPA documentation (i.e. Forest Service requirement, Record of Decision, supplemental EIS)? If so, attach.

No